

# FISCAL YEARS 2008 - 2009 STATEWIDE PLANNING & RESEARCH, PART II RESEARCH PROGRAM

July 1, 2008

Research ID Number	New Project Number	Description	Project Manager	Vendor Name
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## SPR PART II ADMINISTRATION

		Research Program Administration	C. Roberts	MDOT
		MDOT- 2008 Research Summit Support	C. Roberts	
	101668	TRB Research Correlation Service (July 2008 - June 30 2009)	C. Roberts	TRB
	101713	MDOT Research Peer Exchange	C. Roberts	CTC & Associates
OR00027	101671	Publications of the Office of Research & Best Practices (formerly Research Record)	S. Kulkarni	MTU
	102039	NCHRP TPF- 5(404) for FY08	S. Kulkarni	MTU
<b>FY 08 Administration Budget Subtotals:</b>			<b>\$1,545,196</b>	

## MDOT: IN-HOUSE PROJECTS

	101669	Stainless Reinforcement in Bridge Decks	S. Kahl	MDOT
	101673	Stainless-Clad Reinforcing Bar in Bridge Decks	S. Kahl	MDOT
OR00020	102052	High Occupancy Vehicle (HOV) Research	S. Datta	MDOT
	102026	Electronic Frost Sensor	G. Palmer	MDOT
	102028	Winter Operations Level of Service Evaluation	T. Croze	MDOT
<b>FY 08 Staffed In-House Subtotals:</b>			<b>\$90,000</b>	

## UNIVERSITY PROJECTS: CONTRACTED

### Bridges and Structures

	101674	Link Slabs for Jointless Bridge Decks Based on Strain-Hardening Cementitious Composites - Phase 3	R. Till	UM
	101675	Enhancement of Michigan's Bridge Management System (BMS) Using Pontis Software & Michigan Specific Elements	B. Kelley	WSU
	101686	Repair Strategies for Relieving Structural Distress in Bridge Abutments	R. Till	MSU
	101688	Monitoring & Evaluation of Rapid Bridge Deck Technique at Parkview Bridge, Kalamazoo, MI (goes into FY 09)	S. Kahl	WMU
	101689	Condition Assessment & Methods of Abatement of Prestressed Concrete Box Beam Deterioration (Phase 2) - Joint Project MTU & WMU <b>(MTU)</b>	S. Kahl	MTU
	101691	Condition Assessment & Methods of Abatement of Prestressed Concrete Box Beam Deterioration (Phase 2) - Joint Project MTU & WMU <b>(WMU)</b>	S. Kahl	WMU
	101698	Assessment of Concrete Bridge Deck Overlays (goes into FY 09)	S. Kahl	MSU
	101699	Combining Link-Slab, Deck Sliding Over Back-Wall & Revising Bearings	R. Till	WMU
	101701	Scour Prediction for Michigan Conditions (36 months)	D. Juntunen	WSU
	101702	Scour Prediction for Michigan Conditions (36 months)	D. Juntunen	LTU
	101708	Transverse Post Tensioning of Side-by-Side Box Girders	R. Till	LTU
	101714	Design for Strand Debonding at Ends of Pretensioned Beams (24 months)	S. Kahl	MSU
	101716	Skewed Bridges (27 months)	P. Jansson	WSU
	101718	Rapid Construction Solutions Using Prefabricated Prestressed Concrete Systems - Phase 2	R. Till	MTU
	101719	Feasibility Study for GPS Based Bridge Monitoring System on Mackinaw Bridge	B. Jersey	T-B-D
OR00006	101729	Scour Countermeasures for Michigan	R. Till	MTU
OR00007	101731	ID Causes and Solution Strategies for Deck Cracking in Jointless Bridges	R. Till	MSU
OR00008	101732	High Skew Link Slab Bridge System With Deck Sliding Over Back Wall or Back Wall Sliding Over Abutment	R. Till	WSU
OR00009	101733	Causes and Cures for Deterioration of Box-Beam Bridges- Phase 3	R. Till	MTU

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OR00010	101734	Investigate Causes & Develop Methods for Preventing Falling Concrete from Bridge Decks or Falling Deck Concrete Hazard: Reasons, Detection & Mitigation	R. Till/J. Staton	LTU
OR00011	101735	Reliability-Based Evaluation of Loading Configuration for Long-Span Bridges or Reliability-Based Load Configurations for Rating of Long-Span Bridges in Michigan	R. Till	MTU
<b>FY08 Bridges and Structures Budget Subtotals:</b>			<b>\$2,020,534</b>	

Pavement and Construction				
	101997	Evaluation of Concrete Pavements With Material-Related Distress (goes into FY 09)	D. Smiley	MTU
	101998	Performance Evaluation of JRCP with Stabilized Open-Graded Drainage Course	D. Smiley	UM
OR00026	101999	Value Effect of Construction Incentive Payments on Pavement Performance	D. Smiley	MSU
	102001	Assessment of Pavement Acceptance Criteria & Quantifying Its As-Constructed Material & Structural Properties	D. Smiley	MSU
	102008	Evaluation of the I-37A Design Process for New & Rehabilitated Jointed Concrete and HMA Pavements (goes into FY 08)	M. Eacker	MSU
	102009	Quantifying Coefficient of Thermal Expansion Values of Typical Hydraulic Cement Concrete Paving Mixtures	M. Eacker	MSU
OR00012	102077	A New Generation of High-Performance JPCP for Michigan High-Volume Truck Routes such as I-75 & I-94	D. Smiley	UM
OR00001	102078	Characterization of Traffic for the New ME Design Guide (I-37A) for Michigan	M. Eacker	MSU
OR00013	102079	Backcalculation of Resilient Modulus Values for Unbound Pavement Materials	M. Eacker	MSU
OR00014	102084	Investigation of Pavement Distress Due to Logging Trucks in the Superior Region	C. Bleech	MTU
<b>FY08 Pavement/Construction Budget Subtotals:</b>			<b>\$905,559</b>	

Concrete and Materials				
	101737	Improved Shallow Depth Patches for Concrete Structures	S. Kahl	MSU
	101738	Performance of Michigan's Jointed Portland Cement Concrete (PCC) Pavements - Phase 2	A. Robords	SME
	101739	Durability Study of US-23 Aggregate Test Road & Recent JPCP Projects with Premature Joint Deterioration	D. Smiley	UM
	101743	Development of New Test Procedures for Measuring Fine and Coarse Aggregate Specific Gravities	J. Barak	MTU
	101745	Impact of Hydrated Cement Paste Quality and Entrained Air-Void System on the Durability of Concrete	J. Staton	MTU
OR00002	101746	Efficient Use of Recycled Concrete In Transportation Infrastructure	J. Staton	MTU
OR00015	102085	Major Factors Controlling Dowel Bar Looseness in JPCP	D. Smiley	UM
<b>FY08 Concrete/Materials Budget Subtotals:</b>			<b>\$630,754</b>	

Hot Mix Asphalt (HMA)				
	102016	Resilient Modulus at the Limits of Gradation & Varying Degrees of Saturation	A. Robords	MTU
	102017	Development of Specifications for the SuperPave Simple Performance Tests (goes into FY 09)	J. Barak	MTU
	102018	Pavement Subgrade Mr Design Values for Michigan's Seasonal Changes	D. Weber	MSU
	102055	Assessment of Modified Asphalt Binders	J. Barak	MTU
OR00017	102057	Develop a Trial Specification Criteria for Mineral Fines Used in Hot Mix Asphalt for Michigan	J. Barak	MTU
OR00005	102058	Laboratory Evaluation of Warm Asphalt Mix	C. Bleech	MTU
<b>FY08 Hot Mix Asphalt (HMA) Budget Subtotals:</b>			<b>\$307,240</b>	

ITS Safety and Operations				
	Pending	Before and After Analysis- Effect of All Red Phase at Signalized Intersections on State Trunkline Roadways	P. Corlett	MSU
	102043	Evaluation of Economic Impacts of VII Program in Michigan	G. Krueger	MSU

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	102044	MDOT Vehicle Infrastructure Integration Data Analysis Documentation and Research Support	G. Krueger	UM
	102045	Evaluation of the Usage and Impact of the MI VII Program		Mixon-Hill
OR00004	102047	Evaluation of Right-Turn-In/Right-Turn-Out Restrictions	L. Olsen	MSU
<b>FY08 ITS Safety and Operations Budget Subtotals:</b>			<b>\$2,171,600</b>	

Special Projects				
	Pending	A Study of Ports and Waterways - Their Integration into the Rail and Highway Networks of Michigan		MSU
	Pending	Our Aging Population and its Impact on Michigan Transit		UM
	102023	Effect of Michigan Multi-Axle Trucks on Pavement Distress	M. Eacker	MSU
	102027	Assessing Alternative Transportation Investment Strategies	M. Webb	UM
	102029	Height Modernization Pilot Project - Phase 1 Continued Plus Phase 2	A. Semenchuk	Patrick Engineering
	102106	University of Detroit- Mercy UTC (Continued)	N. Annelin	U of D - Mercy
OR00038	102031	Pavement Management System Pilot for Automated Distress Recognition	P. Schafer	T-B-D
OR00041	102086	ITS Hardware Laboratory and Equipment	G. Krueger	MDOT
OR00033	102103	Height Modernization Project - Phase 3 and Phase 4	B. Dollman-Jersey	T-B-D
OR00039	102104	Guidelines for Applying Traffic Microsimulation Modeling	S. Gorski	T-B-D
<b>FY08 Special Projects Budget Subtotals:</b>			<b>\$1,331,902</b>	

TRANSPORTATION POOLED FUND (TPF) STUDIES (100% FEDERAL FUNDS)				
	Completed	Hot Poured Crack Sealant TPF- 5(045)	M. Eacker	FHWA
	Approved	Evaluation of Test Methods for Permeability (Transport) and Development of Performance Guidelines for Durability TPF-5(179)	J. Staton	FHWA
	Approved	Transportation Research Program Management Database	A. Marron	FHWA
OR00051	102509	National Transportation Asset Management Research Program TPF-5(036) JJ1473	J. Reincke	FHWA
OR00049	103162	Transportation Library Connectivity	A. Briseno	FHWA
OR00050	103165	Construction of Crack-Free Concrete Bridge Decks, Phase 2 TPF-5(174)	J. Staton	FHWA
	Completed	Evaluation of CTCLS Series Traffic Signal Load Switches SPR-3(068)	A. Clover	FHWA
		FHWA (SHRP) LTPP Support	T. Hynes	FHWA
	102032	Clear Roads Pooled Fund (\$25,000 for 4 yrs.) TPF-5(092) JJ2397	T. Croze	FHWA
	102033	Recycled Unbound Pavement Materials (MN Road Study) TPF-5(129) JJ2662	M. Eacker	FHWA
OR00021	102034	Technology Transfer Concrete Consortium TPF- 5(159)	J. Staton	FHWA
OR00022	102035	Long Term Maintenance of Load and Resistance Factor Design Specs TPF-5(068) (Approved Commitment Increase)	R. Till	FHWA
OR00023	102036	Aurora Pooled Fund Project SPR-3(042)	J. Schultz	FHWA
		Safety Analyst Support Solicitation Number 1189	D. Lighthizer	FHWA
	102037	Transportation Management Center Pooled Fund Study SPR-2(207)	S. Peplinski	FHWA
<b>FY08 Pooled Fund Studies Budget Subtotals:</b>			<b>\$248,698</b>	

<b>FISCAL YEAR 2008 APPROVED PROGRAM BUDGET</b>	<b>\$9,251,483</b>
FEDERAL SHARE:	<b>\$7,664,297</b>
STATE SHARE:	<b>\$1,587,186</b>